

Claims

1. A wind power plant having a rotor which is rotatably supported with respect to a rotor axis by means of a bearing arrangement (20) and has a rotor blade (13) fixed to a rotor hub (10) and extending therefrom radially outwardly, with respect to the rotor axis, characterized in that said bearing arrangement (20) comprises a first bearing ring (22, 24) being fixed to a support arrangement (30) in a torque-proof manner and disposed coaxially with respect to said rotor axis, and a second bearing ring (24, 22) being rotatably, with respect to said rotor axis, supported on said first bearing ring (22, 24) and fixed to said rotor hub (10).
2. The wind power plant according to claim 1, characterized in that the rotor is coupled to the input of a gear arrangement which can be coupled to a generator (80) at its output end.
3. The wind power plant according to claim 1 or 2, characterized by a torque transmission arrangement (50, 52) extending radially inwardly with respect to the rotor axis from the second bearing ring (24, 22).
4. The wind power plant according to claim 3, characterized in that the torque transmission arrangement (50, 52) has at least one passage opening (50a) allowing access to the interior of the rotor hub (10).
5. The wind power plant according to claim 4, characterized in that the torque transmission arrangement (50, 52) comprises a spoke wheel (50) fixed to said second bearing ring (24, 22), said spoke wheel (50) having two, three or more passage openings (50a).
6. The wind power plant according to any of the preceding claims, characterized in that the first bearing ring (22, 24) is the outer ring (24) or inner ring (22) of a roller bearing, the inner ring (22) or outer ring (24) of said roller bearing being formed by said second bearing ring (24, 22), respectively.
7. The wind power plant according to any of the preceding claims, characterized in that said support arrangement (30) is formed as a sandwich structure having an inner support layer (32) and an outer support layer (34), said inner and outer layers being defined with respect to said rotor axis, and a filling layer (36) disposed between said support layers (32, 34).

8. The wind power plant according to claim 7, characterized in that at least one of said support layers (32, 34) comprises a tubular construction.
9. The wind power plant according to claim 7 or 8, characterized in that the filling layer (36) comprises at least one spacer (40), a honeycomb structure, polyurethane foam, metallic foam and/or a balsa core.
10. The wind power plant according to any of the preceding claims, characterized in that the first bearing ring (22, 23) is fixed to the support arrangement (30) via a bending resistant front flange (42).
11. The wind power plant according to any of the preceding claims, characterized in that at least one rotor blade (13) is fixed to the rotor hub (10) in a manner so that it can be rotated about its longitudinal axis.
12. The wind power plant according to any of the preceding claims, characterized by a covering element (16) which at least partially surrounds the rotor hub (10).
13. A bearing arrangement for a wind power plant according to any of the preceding claims having a first bearing ring (22, 24) being fixed to a support arrangement (30) in a torque-proof manner and a second bearing ring (24, 22) being rotatably supported on said first bearing ring (22, 24) and fixed to a rotor hub (10) supporting at least one rotor blade (13).